

ALCATEL-LUCENT OMNIACCESS 210 SERIES ACCESS POINTS

AFFORDABLE, HIGH-PERFORMANCE 802.11AC

Multifunctional and affordable Alcatel-Lucent OmniAccess 210 series wireless access points (APs) maximize mobile device performance in medium-density, high-performance Wi-Fi environments.



These compact and cost-effective dual-radio APs deliver wireless data rates of up to 1.3 Gbps to 5-GHz devices with 802.11ac technology. They also support 3x3 MIMO with three spatial streams as well as 2.4-GHz 802.11n clients at data rates up to 450 Mbps.

The AP215 and IAP215 models have six integrated omni-directional downtilt antennas, while the AP214 and IAP214 support external, detachable dual-band antennas using three RP-SMA connectors.

FEATURES

- RF management
 - Adaptive Radio Management™ (ARM) technology automatically assigns channel and power settings, provides airtime fairness and ensures that APs stay clear of all sources of RF interference to deliver reliable, high-performance WLANs.
 - 210 series APs can be configured to provide part-time or dedicated air monitoring for spectrum analysis and wireless intrusion protection, VPN tunnels to extend corporate resources to remote locations, and wireless mesh connections where Ethernet drops are not available.
- Spectrum analysis
 - Capable of part-time or dedicated air monitoring, the spectrum analyzer remotely scans the 2.4-GHz and 5-GHz radio bands to identify sources of RF interference

- Security
 - Integrated Trusted Platform Module (TPM) for secure storage of credentials and keys.
 - SecureJack-capable for secure tunneling of wired Ethernet traffic.

BENEFITS

- Wi-Fi client optimization
 - The 210 series features patented ClientMatch™ technology to eliminate sticky client behavior while users roam. ClientMatch continuously gathers session performance metrics from mobile devices.
 - If a mobile device moves away from an AP or if RF interference impedes performance, ClientMatch automatically steers the device to a better AP.
- Advanced Cellular Coexistence (ACC)
 - ACC lets WLANs to perform at peak efficiency by minimizing interference from 3G/4G LTE networks, distributed antenna systems and commercial small cell/femtocell equipment.
- Quality of service for unified communication apps
 - The 210 series supports priority handling and policy enforcement for unified communication apps, including Microsoft Lync with encrypted videoconferencing, voice, chat and desktop sharing.

Choose your operating mode

The 210 series supports your choice of operating modes to meet unique management and deployment requirements.

- Controller-managed AP or Remote AP (RAP) running AOS-W. When managed by OmniAccess Mobility Controllers, 210 series APs offer centralized configuration, data encryption, policy enforcement and network services as well as distributed and centralized traffic forwarding.
- Alcatel-Lucent Instant™ AP running InstantOS™. In Instant mode, a single AP automatically distributes the network configuration to other Instant APs in the WLAN. Simply power-up on Instant AP, configure it over the air, and plug in the other APs – the entire process takes about five minutes.

AP-210 SERIES SPECIFICATIONS

- AP215 and IAP215
 - 2.4-GHz (450 Mbps max rate) and 5-GHz (1.3 Gbps max rate) radios, each with 3x3 MIMO and six integrated omni-directional downtilt antennas.
- AP214 and IAP214
 - 2.4-GHz (450 Mbps max rate) and 5-GHz (1.3 Gbps max rate) radios, each with 3x3 MIMO and three combined, diplexed (dual-band) external RP-SMA antenna connectors.

Operating modes

- Instant AP
- Mobility Controller-managed AP
- Remote AP (RAP) for branch deployments
- Air monitor (AM) for wireless IDS, rogue detection and containment
- Spectrum analyzer, dedicated or hybrid
- Secure enterprise mesh (targeted for introduction in AOS-W 6.4.3)

WIRELESS RADIO SPECIFICATIONS

- AP type: Indoor, dual radio, 5 GHz 802.11ac and 2.4 GHz 802.11n 3x3:3
- Software-configurable dual radio supports 5 GHz (Radio 0) and 2.4 GHz (Radio 1)
- 3x3 MIMO with three spatial streams and up to 1.3 Gbps wireless data rate
- Supported frequency bands (country-specific restrictions apply):
 - 2.4000 GHz to 2.4835 GHz
 - 5.150 GHz to 5.250 GHz
 - 5.250 GHz to 5.350 GHz

- 5.470 GHz to 5.725 GHz
- 5.725 GHz to 5.850 GHz
- Available channels: Dependent on configured regulatory domain
- Dynamic frequency selection (DFS) optimizes the use of available RF spectrum
- Supported radio technologies:
 - 802.11b: Direct-sequence spread-spectrum (DSSS)
 - 802.11a/g/n/ac: Orthogonal frequency-division multiplexing (OFDM)
- Supported modulation types:
 - 802.11b: BPSK, QPSK, CCK
 - 802.11a/g/n/ac: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM
- Transmit power: Configurable in increments of 0.5 dBm
- Maximum (aggregate, conducted total) transmit power (limited by local regulatory requirements):
 - 2.4-GHz band: +23 dBm (18 dBm per chain)
 - 5-GHz band: +23 dBm (18 dBm per chain)
 - Note: conducted transmit power levels exclude antenna gain. For total (EIRP) transmit power, add antenna gain
- Advanced Cellular Coexistence (ACC) minimizes interference from cellular networks
- Maximum ratio combining (MRC) for improved receiver performance
- Cyclic delay/shift diversity (CDD/CSD) for improved downlink RF performance
- Short guard interval for 20-MHz, 40-MHz and 80-MHz channels
- Space-time block coding (STBC) for increased range and improved reception
- Low-density parity check (LDPC) for high-efficiency error correction and increased throughput
- Transmit beamforming (TxBF) for increased signal reliability and range
- Supported data rates (Mbps):
 - 802.11b: 1, 2, 5.5, 11
 - 802.11a/g: 6, 9, 12, 18, 24, 36, 48, 54
 - 802.11n: 6.5 to 450 (MCS0 to MCS23)
 - 802.11ac: 6.5 to 1,300 (MCS0 to MCS9, NSS = 1 to 3)
- 802.11n high-throughput (HT) support: HT 20/40
- 802.11ac very high throughput (VHT) support: VHT 20/40/80
- 802.11n/ac packet aggregation: A-MPDU, A-MSDU

Antennas

- AP-214/IAP-214: Three RP-SMA connectors for external dual-band antennas. Internal loss between radio interface and external antenna connectors (due to diplexing circuitry): 1.0 dB in 2.4 GHz and 2.0 dB in 5 GHz.
- AP215/IAP215: Six integrated downtilt omni-directional antennas for 3x3 MIMO with maximum antenna gain of 5.0 dBi in 2.4 GHz and 5.0 dBi in 5 GHz. Built-in antennas are optimized for horizontal ceiling mounted orientation of the AP. Downtilt angle for maximum gain is roughly 30 degrees.

Other interfaces

- One 10/100/1000BASE-T Ethernet network interface (RJ-45)
 - Auto-sensing link speed and MDI/MDX
 - 802.3az Energy Efficient Ethernet (EEE)
 - PoE-PD: 48 Vdc (nominal) 802.3af or 802.3at PoE
- DC power interface, accepts 1.7/4.0-mm center-positive circular plug with 9.5-mm length
- USB 2.0 host interface (Type A connector)
- Visual indicators (LEDs):
 - Power/system status
 - Ethernet link status (ENET)
 - Radio status (two; RAD0, RAD1)
- Reset button: factory reset (during device power-up)
- Serial console interface (RJ-45)
- Kensington security slot

Power

- Maximum (worst-case) power consumption: 14.9 watts (PoE) or 13.6 watts (DC)
 - Excludes power consumed by external USB device (and internal overhead); this could add up to 6 watts (PoE) or 5.5 watts (DC) for 5W/1A USB device
- Maximum (worst-case) power consumption in idle mode: 8.2 watts (PoE) or 7.4 watts (DC)
- Direct DC source: 12 Vdc nominal, ±5%
- Power over Ethernet: 48 Vdc (nominal) 802.3af/802.3at compliant source
 - USB port is disabled when using an 802.3af PoE power source; for unrestricted operation with PoE power, use an 802.3at compliant source
- Power sources sold separately
- When both power sources are available, DC power takes priority

Mounting

- Included with AP:
 - Mounting brackets (2) for attaching to 9/16-inch or 15/16-inch T-bar drop-tile ceiling
- Spare mounting kit:
 - AP-220-MNT-C1: OmniAccess AP mount kit contains two ceiling-grid rail adapters for flat rails
- Optional mounting kits:
 - AP-220-MNT-C2: OmniAccess AP mount kit contains two ceiling-grid rail adapters for Interlude and Silhouette style rails
 - AP-220-MNT-W1: OmniAccess AP mount kit contains one basic flat-surface wall/ceiling mount bracket
 - AP-220-MNT-W2: OmniAccess AP mount kit contains one secure flat-surface wall/ceiling mount cradle

Mechanical

- Dimensions/weight (unit, excluding mount accessories):
 - 180 mm x 180 mm x 45 mm (W x D x H)
 - 610 g
- Dimensions/weight (shipping):
 - 220 mm x 225 mm x 55 mm (W x D x H)
 - 860 g

Environmental

- Operating:
 - Temperature: 0° C to +50° C (+32° F to +122° F)
 - Humidity: 5% to 95% non-condensing
- Storage and transportation:
 - Temperature: -40° C to +70° C (-40° F to +158° F)

Regulatory

- FCC/Industry of Canada
- CE Marked
- R&TTE Directive 1999/5/EC
- Low Voltage Directive 2006/95/EC
- EN 300 328
- EN 301 489
- EN 301 893
- UL/IEC/EN 60950
- EN 60601-1-1, EN60601-1-2

For more country-specific regulatory information and approvals, please see your Alcatel-Lucent representative.

Reliability

MTBF: 538,975 hours (61.5 years) at +25° C operating temperature

Regulatory model numbers

- AP214 and IAP214: APIN0214
- AP215 and IAP215: APIN0215

Certifications

- CB Scheme Safety, cTUVus
- UL2043 plenum rating
- Wi-Fi Alliance (WFA) certified 802.11a/b/g/n/ac

Warranty

- Limited lifetime warranty

Minimum software Versions

- AOS-W 6.4.2.0
- InstantOS™ 4.1.1.0

RF performance table

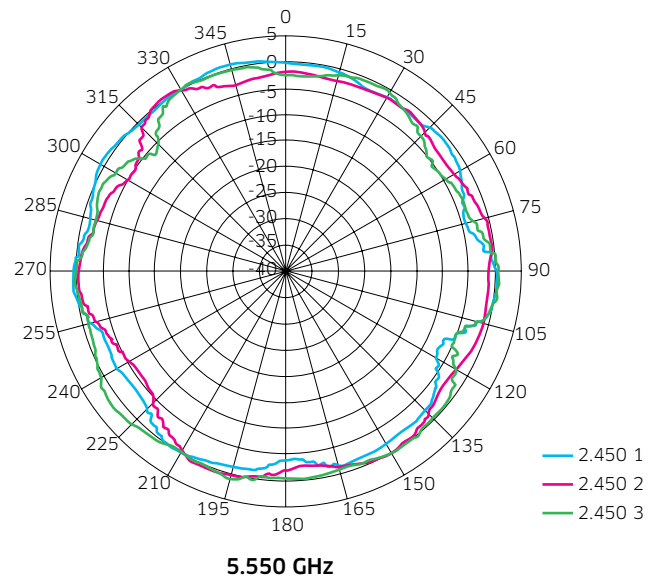
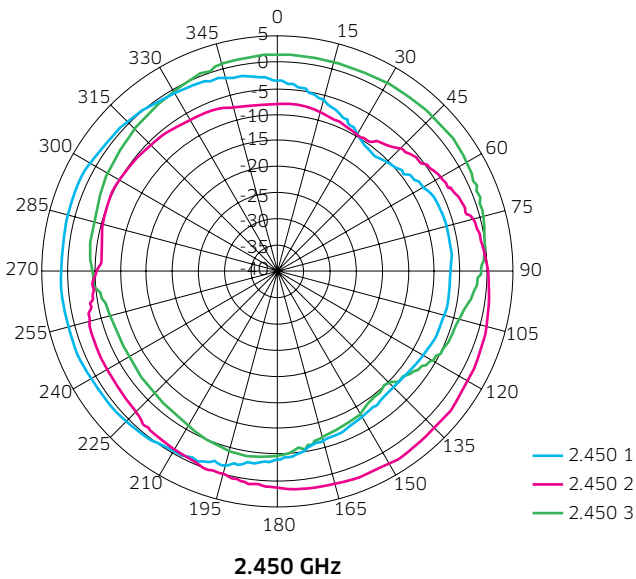
	MAXIMUM TRANSMIT POWER (DBM) PER TRANSMIT CHAIN	RECEIVER SENSITIVITY (DBM) PER RECEIVE CHAIN
802.11b 2.4 GHz		
1 Mbps	18.0	-97.0
11 Mbps	18.0	-89.0
802.11g 2.4 GHz		
6 Mbps	18.0	-93.0
54 Mbps	18.0	-75.0
802.11n HT20 2.4 GHz		
MCS0/8/16	18.0	-92.0
MCS7/15/23	16.0	-72.0
802.11n HT40 2.4 GHz		
MCS0/8/16	18.0	-90.0
MCS7/15/23	16.0	-70.0
802.11a 5 GHz		
6 Mbps	18.0	-93.0
54 Mbps	16.5	-75.0
802.11n HT20 5 GHz		
MCS0/8/16	18.0	-92.0
MCS7/15/23	16.0	-72.0
802.11n HT40 5 GHz		
MCS0/8/16	18.0	-89.0
MCS7/15/23	16.0	-69.0

	MAXIMUM TRANSMIT POWER (DBM) PER TRANSMIT CHAIN	RECEIVER SENSITIVITY (DBM) PER RECEIVE CHAIN
802.11ac VHT 20 5 GHz		
MCS0	18.0	-92.0
MCS9	14.0	-65.0
802.11ac VHT40 5 GHz		
MCS0	18.0	-89.0
MCS9	14.0	-62.0
802.11ac VHT80 5 GHz		
MCS0	18.0	-86.0
MCS9	14.0	-59.0

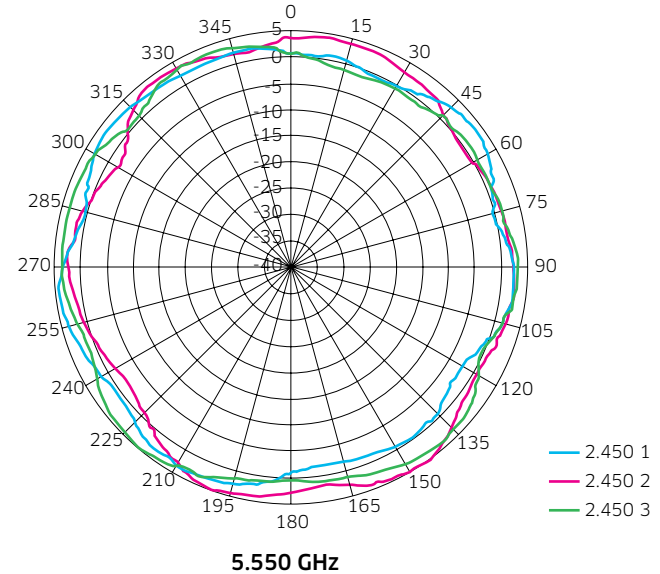
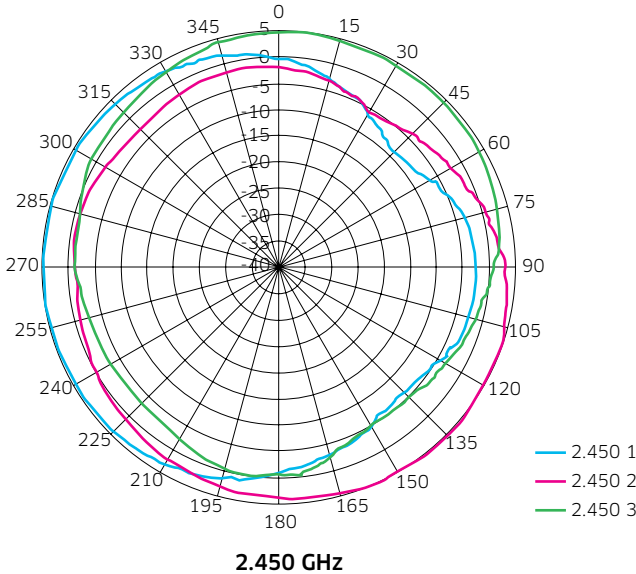
Maximum capability of the hardware provided (excluding antenna gain). Maximum transmit power is limited by local regulatory settings.

Antenna pattern plots

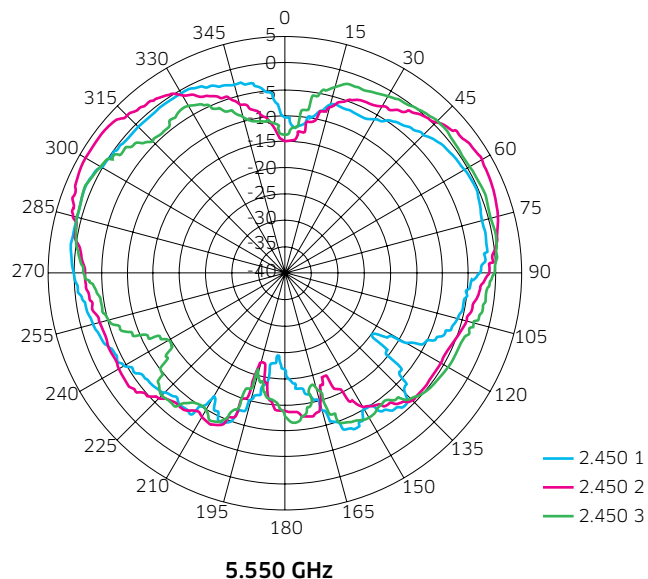
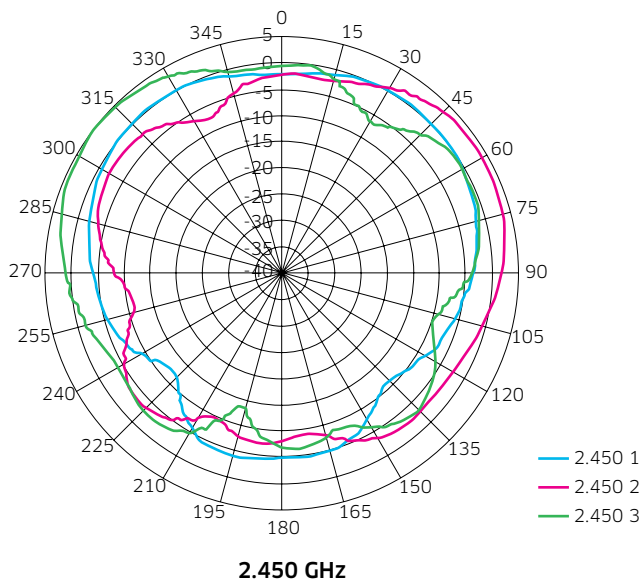
Horizontal or azimuth plane (top view, 0 degrees downtilt)



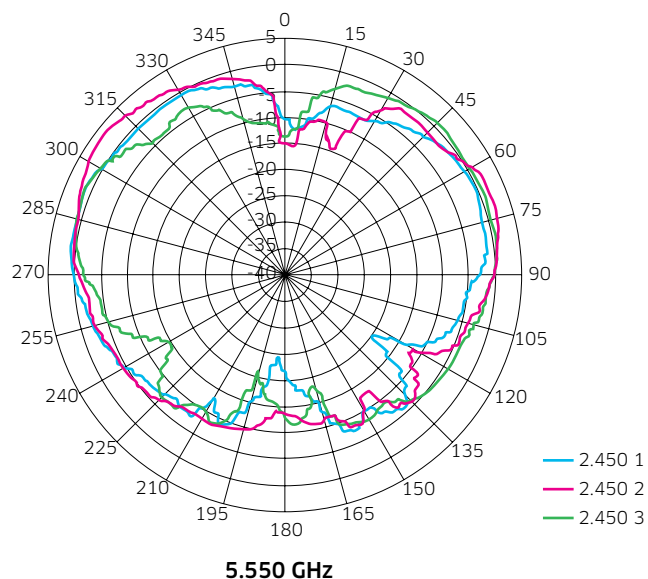
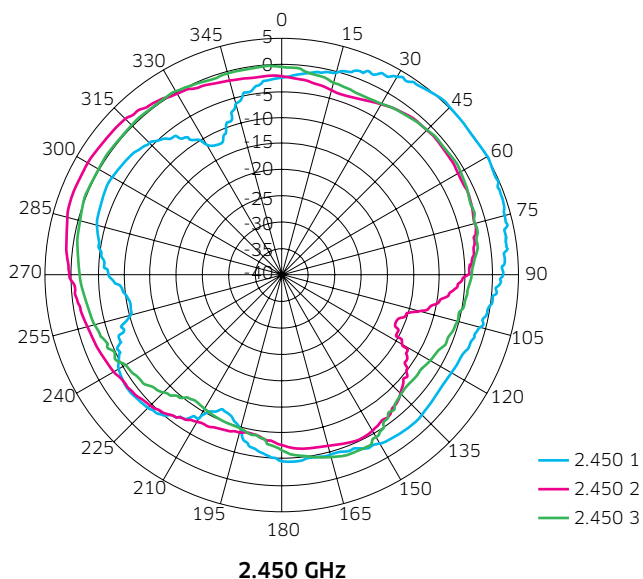
Horizontal or azimuth plane (top view, 30 degrees downtilt)



Elevation plane (side view, 0 degrees angle)



Elevation plane (side view, 90 degrees angle)



ORDERING INFORMATION

PART NUMBER	DESCRIPTION
AP210 series access points	
OAW-AP214	OmniAccess AP214 Wireless Access Point, 802.11n/ac, 3x3:3, dual radio, antenna connectors
OAW-IAP214-RW	OmniAccess AP214 Wireless Instant Access Point, 802.11n/ac, 3x3:3, dual radio, antenna connectors - Restricted regulatory domain: Rest of World
OAW-IAP214-US	OmniAccess AP214 Wireless Instant Access Point, 802.11n/ac, 3x3:3, dual radio, antenna connectors - Restricted regulatory domain:United States
OAW-IAP214-JP	OmniAccess AP214 Wireless Instant Access Point, 802.11n/ac, 3x3:3, dual radio, antenna connectors - Restricted regulatory domain: Japan
OAW-AP215	OmniAccess AP215 Wireless Access Point, 802.11n/ac, 3x3:3, dual radio, integrated antennas
OAW-IAP215-RW	OmniAccess AP215 Wireless Instant Access Point, 802.11n/ac, 3x3:3, dual radio, integrated antennas - Restricted regulatory domain: Rest of World

PART NUMBER	DESCRIPTION
OAW-IAP215-US	OmniAccess AP215 Wireless Instant Access Point, 802.11n/ac, 3x3:3, dual radio, integrated antennas - Restricted regulatory domain:United States
OAW-IAP215-JP	OmniAccess AP215 Wireless Instant Access Point, 802.11n/ac, 3x3:3, dual radio, integrated antennas - Restricted regulatory domain:Japan
Mounting spares	
AP-220-MNT-C1	OmniAccess access point mount kit (ceiling grid). Contains two ceiling grid rail adapters (for flat rails). Color: Black. Spare.
Mounting accessories	
OAW-AP220-MNTC2	OmniAccess AP220 Series Access Point Mount Kit (ceiling grid). Contains 2x ceiling grid rail adapters (for Interlude and Silhouette style rails). Color Black
OAW-AP220-MNTW1	OmniAccess AP220 Series Access Point Mount Kit (basic, flat surface). Contains 1x flat surface wall/ceiling mount bracket. Color Black
OAW-AP130-MNT	OmniAccess AP130 Series Access Point Wall / Ceiling Mounting Kit. Color: Off-white
AP-220-MNT-W2	OmniAccess access point mount kit (secure, flat surface). Contains one flat surface wall/ceiling mount cradle. Color: Black
AP-220-MNT-W2W	OmniAccess access point mount kit (secure, flat surface). Contains one flat-surface wall/ceiling mount cradle. Color: White
Generic indoor AP accessories	
OAW-AP-AC-UN	Universal AC Power Adapter Kit for OmniAccess AP and IAP 105, 92, 92 - North America, Japan, United Kingdom, Italy, EC (Shuko), Australia, China, India, Korea.
OAW-AP-AC-12V18	OmniAccess12VDC/18W AC Power Adapter for compatible indoor AP models. Does not include country specific power cord (order separately).
OAW-MS-3501G	1 Port 802.3af PoE Midspan 10/100/1000 15.4W. No power cord included.
PD-9001GR-AC	OAW WLAN 1 Port 802.3at PoE Midspan 10/100/1000 30W. US power cord included.